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09/252,485	02/18/1999	JOHN S. HENDRICKS	5615	4559

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EXAMINER

LONSBERRY, HUNTER B

ART UNIT PAPER NUMBER

2611

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/252,485

Applicant(s)

HENDRICKS ET AL.

Examiner

Hunter B. Lonsberry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 July 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 42,43,46-54,57,60-64,74 and 77-79 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 42,43,46-54,57,60-64,74 and 77-79 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 7/21/05 have been fully considered but they are not persuasive.

Applicant argues that "According to the specification on page 44, lines 22-25, performing the functions of any upgrade hardware on an upgrade card is disclosed. All hardware upgrades disclosed in the present invention are inherently disclosed as being able to be located on an upgrade card. The specification also discloses the advanced picture on picture function could be located on the "upgraded hardware components that allow for two or more channels to be tuned and decompressed at any given time." See specification page 49, lines 11-15. Thus, the advanced picture on picture function on an upgrade card is inherently disclosed. In other words, the specification shows that any upgrade hardware can be located on an insertable upgrade card. The picture on picture upgrade is a hardware upgrade. Thus the specification inherently discloses that figure 14 with all the components could be on an insertable upgrade card. (Response page 9).

Regarding applicants argument, Page 44, lines 22-25, states that

*"The use of expansion cards lowers the cost of the set top terminal 220 itself, while also increasing its potential functionality. Thus, an expansion card may include enhanced functional capabilities described as part of the upgrade module discussion*

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*above and be designed to accommodate any hardware upgrade compatible with the set top terminal 220."*

The examiner notes that the discussion on page 44, lines 21-25 is in reference to figures 5a/b having expansion card slots, and is silent with regards to expansion cards and picture on picture capabilities. There is no correlation with any of the components of figure 14, and Figures 5 a/b do not show an upgrade card of any kind, but merely an upgrade port 664. Further, the examiner has reviewed pages 43-44 and 49-51 and figure 14 of applicant's specification, regarding the second signal components (603', 606', 609', 314', 318', 616', etc). It appears as though the ' marker delineates a first and second component, and in no where does it refer to ' marked components as being located on a set top upgrade card. Figure 14 does disclose the use of an expansion card interface 322, and upgrade port 662, but none of the ' marked components show any coupling through either interface 322 or port 662 (nor is there any discussion there of), rather they are shown as being linked through microprocessor 602.

Additionally, neither the specification, nor the drawings describe the boundary, contents or components of the upgrade hardware in relation to figure 14. Therefore, all of the ' marked components must be part of the set top device itself.

The examiner also notes that Figures 12 a/b while directed to hardware upgrades A-E, are not directed to a video hardware upgrade which enables picture in picture presentations, rather figure 12b, is directed towards a digital audio tuner, with not mention of a video tuner, Figure 12a, is directed to computing component upgrades (page 41, lines 4-29, page 42, lines 18-22).

Likewise Page 49, lines 11-15 reads, *"Although the preferred embodiment of the present invention decompresses one channel at a time for the viewer, users who desire a picture-on-picture capability can be provided with a set top terminal 220 having upgraded hardware components that allow two or more channels to be tuned and decompressed at any given time. Once two signals are available, the picture-on-picture capability can be made fully available in the set top terminal 220, without requiring a special television or a VCR."*

The examiner notes that the above passage states that set top terminal 220 has upgraded hardware components. The above disclosure is absolutely silent regarding the use of an upgrade card, likewise it is silent as to which components constitute the upgrade card and which components constitute the set top box. The disclosure is silent as to whether the upgraded components reside on an expansion card, or constitute hardware portions of the set top box itself. Even if an expansion card was utilized in the system for delivering picture on picture capability, one skilled in the art at the time of invention based solely upon applicants disclosure would not be able to make and use the invention as they would not be able to determine which components constitute the hardware upgrade and which components constitute the set top box, because Figure 14 and the supporting disclosure fail to support claims 42-43, 46-54, 57, 60-64, 74 and 79.

Applicant argues that canceled original claims 55-56 disclose that the apparatus with all the components of figure 14 could be located on an upgrade card, and thus the inventors at the time the invention was filed had possession of the claimed invention (Response page 9).

Regarding applicant's argument, original claims 55-56, merely recite that the apparatus may be an upgrade card insertable into a STB and provide POP capability. As noted above, the claimed subject matter is not supported by the specification. In particular, Figure 14, does not show a hardware expansion card, and on page 50, lines 17-23, the specification states that the memory 620 is stored within the set top box and is silent regarding any expansion card. Therefore, all of the ' marked components and non ' marked components must be part of the set top device itself.

Applicant argues that nowhere in the combined references is there any teaching or suggestion of the usage of an upgrade card inserted into an existing set top terminal (pages 10-11), and that the hardware upgrade card is not for an ornamental design, and that the Examiner incorrectly characterized the upgrade card as a mere separation of functions/parts. Applicants did not merely rearrange the parts but have instead invented a new mode of operation by means of which a new result is obtained. The insertable upgrade cards, which did exist and were not taught or suggested in the prior art references. These cards prolong the useable life of the set-top terminal as well as give them flexibility of use. Moreover there is no motivation to modify the prior art to include

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this new mode of operation. Because picture in picture on an upgrade card is not a mere separation of functions/parts it would not have been obvious to include the components for picture in picture on an upgrade card as claimed. (Response pages 10-12).

Regarding applicants argument, the Examiner agrees with applicant that the hardware upgrade card is not for ornamental design. However, the Examiner notes that both claims 77 and 78 are silent regarding PIP capability being located on a hardware upgrade card. Claim 77 merely requires that at least one of the tuners and at least one of the audio decompressors are located on an upgrade card inserted into the STB. Claim 77 is silent as to whether or not the tuners are **video** tuners. Likewise, the Examiner notes that claim 78, merely requires the use of an upgrade port, and is silent regarding the use of an upgrade card. Therefore, applicant is arguing features not present in the claims.

In the previous Office Action the Examiner combined Arai (of record) in view of Willis (of record) and further in view Ryu (of record). Moreover, it would have been obvious to one of ordinary skill in the art to provide the functions on an upgrade card since the modification would have involved a mere separation of functions/parts and applicant did not provide any specific benefit, nor stated that it solve any specific problem *Nerwin V. Erlichman*, 168 USPQ 177, 179 (PTO Bd. of Int. 1969). The cited passage within Applicants' specification does state that upgrade cards prolong the useable life of the set top terminal as well as give them flexibility of use. However, the use of upgrade cards or connection of external devices in the electrical devices art is notoriously well known in order to provide increased flexibility and extending the useful

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life of a device. Numerous examples within the electrical device art include memory upgrades allow for more storage of data on a device than its default capabilities, SCSI expansion cards allow for the connection of data storage devices, modem cards allow for telecommunications exchanges, gaming ports on video game devices allow for new peripherals to be attached which establish new capabilities (paddle controllers on an Atari 2600, hardware cards which allow Atari 2600 games to be played on an Atari 5200), upgrades to the Atari arcade game Star Wars which enables a daughter board to be attached to play an Empire Strikes Back game (which prolongs the useable life of the electronic device) etc. The use of upgrade cards to which prolong the useable life of a device and provide flexibility of use predates applicants invention.

Therefore, the combination of Arai, Willis, and Ryu in combination with the hardware upgrade teachings does teach every aspect of applicant's claimed invention.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2        Claims 42-43, 46-54, 57, 60-64, 74 and 79 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.



The current invention is an apparatus and method for outputting a plurality of signals or an apparatus and method for displaying a picture on a picture with upgrade capability as illustrated in figures 12a, 12b and 14.

The specification at page 3, lines 17-18 indicates that **"the set top terminal may be achieved through a set of hardware upgrades to (1) existing set top converter upgraded with a circuit card"**.

The specification at page 24, lines 3-10 and page 39, line 23 – page 43, line 21 describe hardware upgrades A-E.

The specification at page 43, line 23 – page 44, line 25 describes expansion card slots.

The specification at page 49, lines 11 – 15 describes that **"users who desire picture-on-picture capability can be provided with a set top terminal 220 having upgraded hardware components that allow two or more channels to be tuned and decompressed at any given time"**.

Figure 14 illustrates a set top terminal with an expansion card interface 322.

The specification and drawings fail to support the following claimed subject matter:

a) ***"second signal processing components comprising a second tuner, a second demodulator, a second demultiplexor, a second video/graphics text demultiplexor, a second decompressor.....wherein at least the second signal processing components are located on an upgrade card insertable into an***

**existing set top terminal to provide digital picture-on-picture capability** now recited in claim 42, lines 13-26;

b) **“second signal processing components, wherein the second signal processing components process a second video signal, the second signal processing components also operable to scale and redirect the video signal...wherein the second signal processing components are located on an expansion card inserted into the apparatus”** now recited in claim 79, lines 12-23.

The specification fails to describe the contents or components of the upgrade card. In other words, the disclosure does not describe or suggest that the upgrade card contains one or more of tuner 603, demod 606, demux 609, decrypt 600, decompressor 612, tuner 603', demod 606', demux 609', decrypt 600' and decompressor 612' for the apparatus as now recited in claims 2, 42, 75 and 76. The specification recites a broad statement that the set top terminal has the capability of having an upgrade card, but it fails to describe the actual contents or components of the upgrade card. Figure 14 illustrates a set top terminal with an expansion card interface 322, but it does not illustrate the contents or components of the upgrade card. The components in the hardware upgrades of figures 12a and 12b do not correspond to claims 2, 42, 75 and 76.

Further, claim 42 indicates that the second set of components (second tuner, second demod, second demux etc.) is located on an upgrade card. The specification and drawings fail to describe the boundary, contents or components of the upgrade card

as described in claim 42. For the above reasons, the Examiner posits that claim 42 limitations are new matter and they must be canceled from the claims.

Further, claim 79 indicates that the second set of components (second tuner, second demod, second demux etc.) is located on an upgrade card. The specification and drawings fail to describe the boundary, contents or components of the upgrade card as described in claim 79. For the above reasons, the Examiner posits that claim 79 limitations are new matter and they must be canceled from the claims.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3        Claims 77-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai (of record) in view of Willis (of record) and further in view Ryu (of record).

Considering claims 77 and 78, Arai discloses an apparatus for displaying a picture on a picture and corresponding method comprising:

- a) a plurality of tuners (5A, 5B) (figures 3A and 3B) for tuning;
- b) a plurality of demodulators (27, 28) or demodulating;
- c) a plurality of output ports wherein at least two of the plurality of output ports are connected to different tuners (see audio output from demod (27) to switch (10), three

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video outputs from demod (27) to combiner (8), audio output from demod (28) to switch (10), three video outputs from demod (28) to combiner (8)); and  
d) a microprocessor (26) connected to the plural tuners (5A, 5B) and demodulators (27,28) for coordinating signal processing.

Note that Arai is interested in processing several different television standards for simultaneous display (col. 1, lines 5-15) and he indicated that various changes or modifications could be made to his system (col. 17, lines 10-34). However, he fails to disclose **(a)** a plurality of audio and video decompressors **(b)** that at least one video signal may have more than one of the plurality of audio signals, and **(c)** that the method uses an upgrade card inserted in an existing set-top terminal as recited in the claims.

Wasilewski discloses a system for transmitting and receiving digital television signals (figures 1-14). Digital television is another type of television standard. The digital receiver (figure 14) comprises: a demodulator (250), demultiplexer (258, 268, 272), decryptors (274), decompressors (276, 280) for decompressing video, audio and text and NTSC encoders (276,280) (columns 21-24). These are typical elements in a digital receiver for processing digital signals transmitted from a central broadcasting facility. Further, note that Wasilewski's system may be used in various applications. See col. 2, line 41 - col. 3, line 14 and col. 34, lines 12-30. Wasilewski provides the advantage of providing digital television receiving elements to properly decode and process digital signals transmitted from a central broadcasting facility and/or to provide higher quality signals to viewers.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Arai's system to include a plurality of digital receiving circuit elements such as demultiplexors, decrypters, decompressors and NTSC encoders, as taught by Wasilewski, for the typical advantage of providing digital television receiving elements to properly decode and process digital signals transmitted from a central broadcasting facility and/or to provide higher quality signals to viewers.

The combination of Arai and Wasilewski fails to disclose one video signal having a plurality of corresponding audio signals, or utilizing an upgrade card.

Ryu discloses an apparatus for displaying a picture on a picture and corresponding method comprising a plurality of tuners (9,10), video processing circuits (4,5) for outputting video signals, and sound circuits (8, 12, 13) for outputting more than one of plurality of audio signals (native or foreign) corresponding to at least one video signal. See the entire reference including but not limited to the abstract and col. 2, lines 20-62.

Additionally, it would have been obvious to one of ordinary skill in the art to modify the combined systems of Arai and Wasilewski to include at least one video signal to have more than one of the plurality of audio signals, as taught by Ryu, for the advantage of providing a plural picture display receiver with the ability to select a desired audio output based on a plurality of audio signals for a video signal.

Moreover, it would have been an obvious matter of design choice to utilize an upgrade card, since the modification would have involved a mere separation of functions/parts. *Nerwin V. Erlichman*, 168 USPQ 177, 179 (PTO Bd. of Int. 1969).

Furthermore, it would have been obvious as a matter of design choice to make any apparatus or method steps to be insertable into any video processing receiver such

as a set-top box, television or VCR, since audio and video signals are commonly received by video processing equipments that are inclusive of the set-top box , television and VCR.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hunter B. Lonsberry whose telephone number is 571-272-7298. The examiner can normally be reached on Monday-Friday during normal business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on 571-272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HBL



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